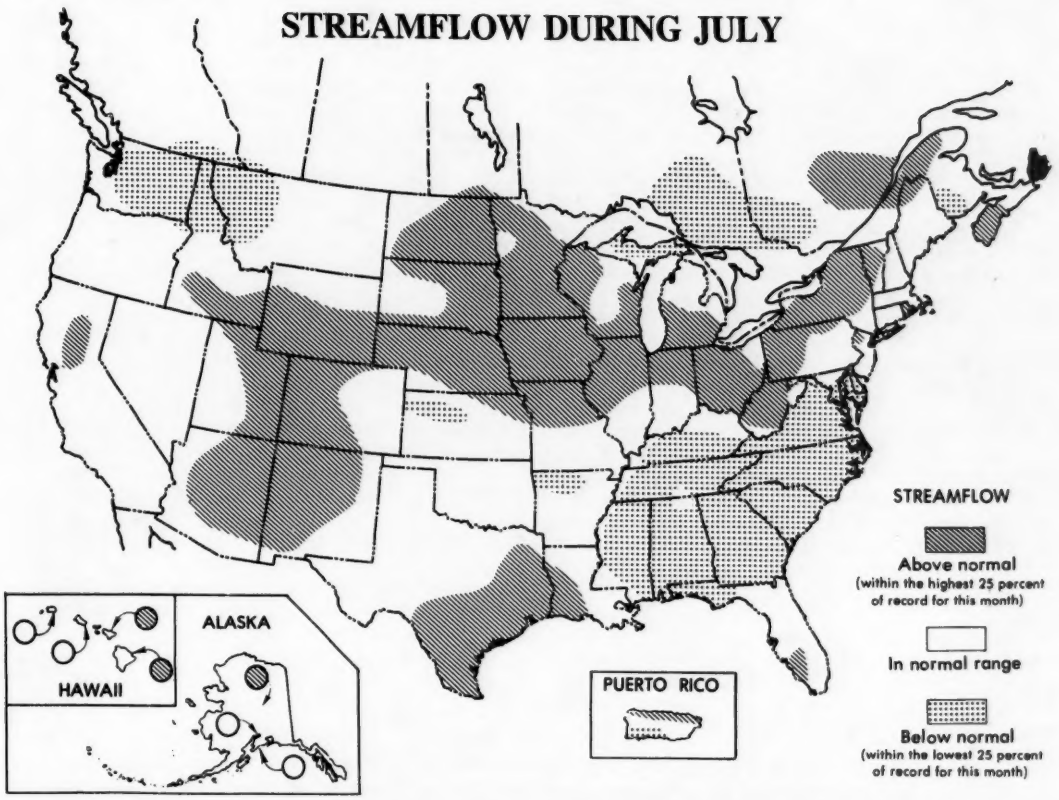
National Water Conditions

UNITED STATES
Department of the Interior
Geological Survey

CANADA
Department of the Environment
Water Resources Branch

JULY 1986

STREAMFLOW DURING JULY



Record low flows for July occurred at 11 index stations in the Southeast and 1 index station in Canada. Drought conditions in the Southeast intensified as below-average precipitation fell in most of the area south of a line from Maryland to Texas. July streamflow at the 16 index stations in the Carolinas, Georgia, and Alabama averaged 36 percent of median. In sharp contrast to drought conditions in the Southeast, streamflow was in the above-normal range in a broad, irregular band arcing from Arizona to Vermont, but the only record high for July occurred in New Mexico. About 77 percent of the 192 index stations in the United States and southern Canada had flows in the normal to above-normal range, compared with the 74 percent in those ranges for last month.

New July lows for ground-water levels occurred at five wells in Georgia. All-time lows for ground-water levels occurred in key wells at Savannah, Georgia, and Memphis, Tennessee.

In mid-July, toxic blooms of blue-green algae occurred in Hebgen Lake which is in the southwestern part of Montana near Yellowstone National Park. Hebgen Lake has had toxic blooms of these algae twice in the past, but this is only the fifth time toxic concentrations of blue-green algae have been documented in Montana.

Contents of 69 percent of reporting reservoirs were at or above average. Most reservoirs with both below-average contents for the end of July and significant declines in contents during July were located in the Southeast.

The combined flow of the 3 largest rivers in the lower 48 States—Mississippi, St. Lawrence, and Columbia—averaged 1,061,000 cubic feet per second during July, 9 percent above median but 31 percent below last month.

STREAMFLOW CONDITIONS DURING JULY 1986

Record low flows for July (see table) occurred at 11 index stations in the Southeast and 1 index station in Canada. Drought conditions in the Southeast intensified as below-average precipitation (see map) fell in most of the area south of a line from Maryland to Texas. January through July precipitation was well below average in much of the Southeast with precipitation deficits at Columbia, South Carolina (only 30 percent of average precipitation for the year), and Birmingham, Alabama (only 35 percent of average precipitation for the year), exceeding 20 inches. The current drought in the Southeast is the worst in 111 years according to a preliminary analysis of January through June precipitation data by the Climate Analysis Center of the National Weather Service. Hydrographs for the 16 index stations in the Carolinas, Georgia, and Alabama on pages 4 and 5 give a good overall picture of streamflow conditions in the area most severely affected by drought conditions. July streamflow at the 16 sites averaged 36 percent of median, ranging from about 20 percent of median for Georgia sites to about 54 percent of median for Alabama sites. Reservoir storage at 8 of the 11 sites in the 4-State area is shown in the hydrographs on page 7. The four Crop Moisture maps on pages 8 and 9 depict short-term changes over a 4-week period, showing both a decrease in the short-term severity of the drought in the Southeast and also gradual drying in the area between eastern Pennsylvania and Kansas. The two Drought Severity maps (page 14) show that long-term conditions have not changed as greatly as short-term conditions.

In sharp contrast to drought conditions in the Southeast, streamflow was in the above-normal range in a broad, irregular band arcing from Arizona to Vermont, but the only record high for July (see table) occurrred in New Mexico. Streamflow in the western core of the wet area—Wyoming, Colorado, and Utah—averaged 210 percent of median for the 12 index stations in the 3 States. The elevation of Utah's Great Salt Lake fell only 0.25 foot, to 4,211.15 feet above sea level, during July. Great Lakes elevations (hydrographs on page 11) remained well above median with average June levels at record highs for both Lake Superior and Lake Erie. The International Joint Commission will be forming a task force to investigate measures for mitigating the adverse effects of lake level fluctuations.

In mid-July, toxic blooms of blue-green algae occurred in Hebgen Lake which is in the southwestern part of Montana near Yellowstone National Park. Four cattle have probably died as a result of algal poisoning this year, according to the Gallatin County Health Officer, and the lake has been posted with signs warning people not to swim in areas where the algae, which look like pea soup, are growing. Water samples collected by the U.S. Forest Service from the Grayling Arm of the lake were tested and contained concentrations of algal byproducts toxic to animals. Hebgen Lake has had toxic blooms of these algae twice in the past (1977 and 1985), but this is only the fifth time toxic concentrations of blue-green algae have been documented in Montana. The 1985 blue-green algal blooms on Lake Hebgen caused the death of 17 cattle.

Streamflow increased seasonally only in Arizona and Florida, but generally increased contraseasonally in Saskatchewan, North Dakota, Kansas, Wisconsin, Ohio, and West Virginia, and increased variably in Hawaii and Alaska. Flows in Iowa, Missouri, Kentucky, Maryland, and Pennsylvania changed variably while flows in the remainder of the United States and southern Canada generally decreased seasonally.

Above-normal flows persisted in parts of Florida, Louisiana, Texas, New Mexico, Arizona, Utah, Colorado, Idaho, Wyoming, Nebraska, the Dakotas, Minnesota, Iowa, Michigan, Indiana, Ohio, Pennsylvania, New York, Vermont, and Hawaii. Flows moved into the above-normal range in parts of Alaska, Puerto Rico, California, Arizona, New Mexico, Utah, Colorado, the Dakotas, Nebraska, Kansas, Minnesota, Iowa, Missouri, Wisconsin, Illinois, Michigan, Indiana, Ohio, West Virginia, Pennsylvania, Quebec, New Brunswick, Maine, Nova Scotia, Rhode Island, and New Jersey.

Below-normal flows persisted in Delaware, the Carolinas, and Georgia, and also in parts of New York, Maryland, Virginia, Tennessee, Alabama, Florida, Ontario, Michigan, Kansas, Montana, Idaho, Oregon, and Washington. Flows moved into the below-normal range in parts of Puerto Rico, Arkansas, Washington, British Columbia, Alberta, Ontario, Quebec, Virginia, Kentucky, Tennessee, Mississippi, and Alabama,

Contents of 69 percent of reporting reservoirs were at or above average. Most reservoirs with both below-average contents for the end of July and significant declines in contents during July were located in the Southeast.

The combined flow of the 3 largest rivers in the lower 48 States—Mississsippi, St. Lawrence, and Columbia—averaged 1,061,000 cubic feet per second during July, 9 percent above median but 31 percent below last month. These three large river systems account for runoff from more than half the conterminous United States and provide a useful check on the status of the Nation's surface-water resources.

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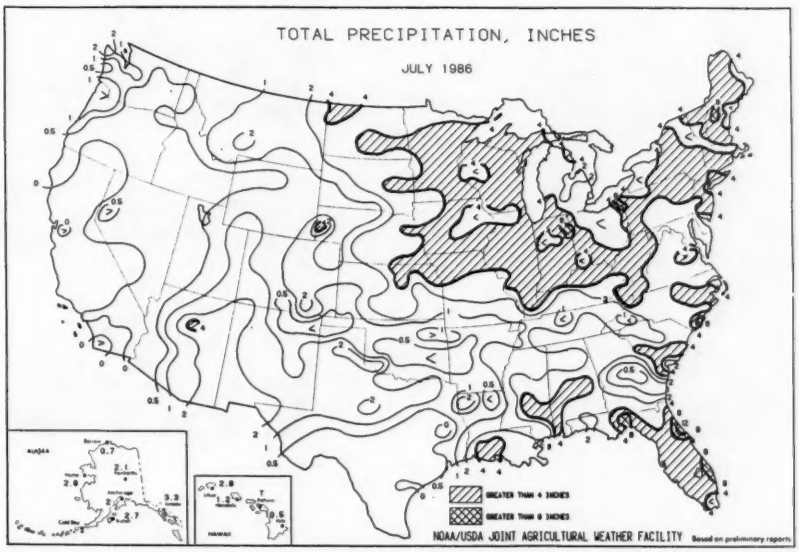
NEW EXTREMES DURING JULY 1986 AT STREAMFLOW INDEX STATIONS

Station number	Stream and place of determination	Drainage area (square miles)	Years of record	Previous July extremes (period of record)		July 1986			
				Monthly mean in cfs (year)	Daily mean in cfs (year)	Monthly mean in cfs	Percent of median	Daily mean in cfs	Day
LOWS									
02102000	Deep River at Moncure, NC.	1,410	56	89.5 (1977)	34 (1977)	80.9	20	40	16
02118000	South Yadkin River near Mocksville, NC.	306	48	95.0 (1956)	59 (1956)	47	24	22	24
02131000	Pee Dee River at Peedee, SC.	8,830	48	2,898 (1952)	1,000 (1940)	1,850	33	. . .	. .
02132000	Lynches River at Effingham, SC.	1,030	57	194 (1970)	120 (1935)	120	22	109	30
02173500	North Fork Edisto River at Orangeburg, SC.	483	48	240 (1954)	209 (1955)	237	39	200	21
02226000	Altamaha River at Doctortown, GA.	13,600	55	2,539 (1982)	2,300 (1981)	1,907	29	1,730	*
02347500	Flint River near Culloden, GA.	1,850	63	352 (1981)	145 (1981)	166	14	83	*
02358000	Apalachicola River at Chattahoochee, FL.	17,300	58	9,010 (1931)	6,420 (1955)	7,840	58	. . .	. .
02371500	Conecuh River at Brantley, AL.	492	49	65.5 (1968)	30 (1981)	59.5	27	40	12
02392000	Etowah River at Canton,GA.	613	59	388 (1981)	240 (1981)	218	27	125	*
03451500	French Broad River at Asheville, NC.	945	91	590 (1925)	375 (1926)	563	41	403	21
04LJ001	Missinaibi River at Mattice, Ontario, Canada.	3,452	66	1,165 (1933)	703 (1981)	1,066	43	579	1
HIGHS									
09430500	Gila River near Gila, NM.	1,864	60	119 (1981)	620 (1929)	214	458	1,100	23

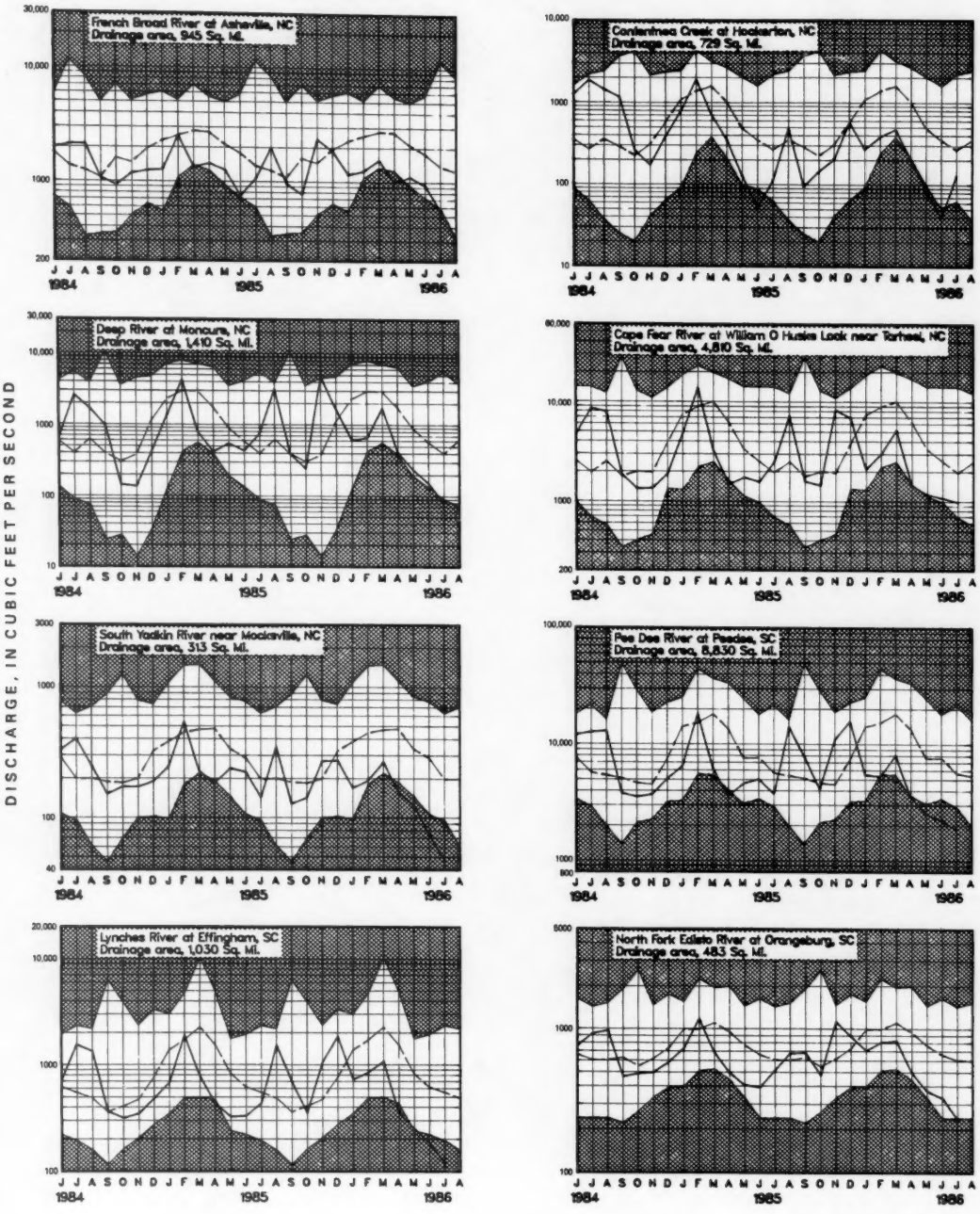
*Occurred more than once.



MONTHLY MEAN DISCHARGE OF SELECTED STREAMS

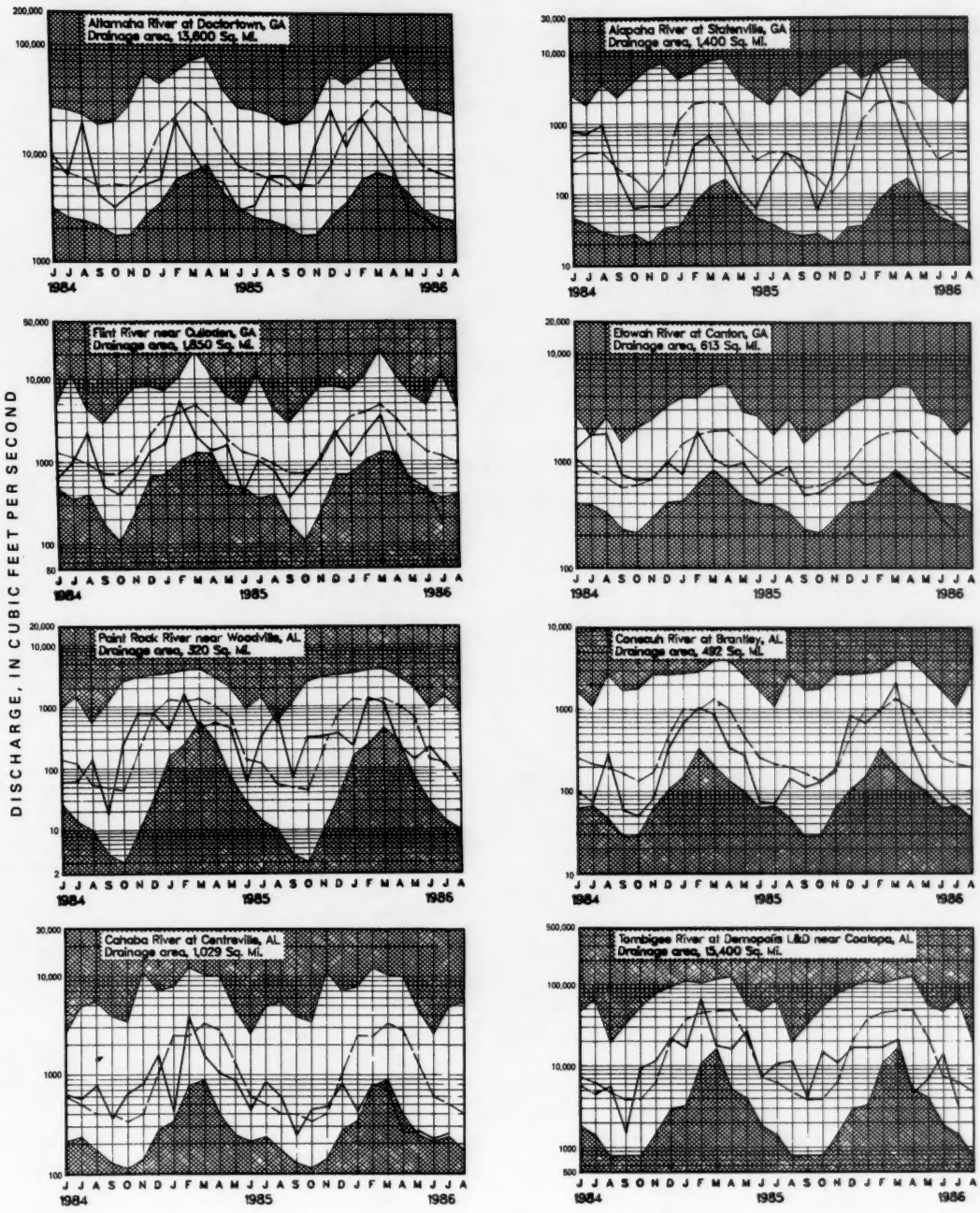
Unshaded area indicates range between highest and lowest record for the month. Dashed line indicates median of monthly values for reference period, 1951–80. Heavy line indicates mean for current period.

DISCHARGE, IN CUBIC FEET PER SECOND


French Broad River at Asheville, NC
Drainage area, 945 Sq. Mi.
Contentnea Creek at Hookerton, NC
Drainage area, 729 Sq. Mi.
Deep River at Moncure, NC
Drainage area, 1,410 Sq. Mi.
Cape Fear River at William O Huske Lock near Tarheel, NC
Drainage area, 4,810 Sq. Mi.
South Yadkin River near Mocksville, NC
Drainage area, 313 Sq. Mi.
Pee Dee River at Peedee, SC
Drainage area, 8,830 Sq. Mi.
Lynches River at Effingham, SC
Drainage area, 1,030 Sq. Mi.
North Fork Edisto River at Orangeburg, SC
Drainage area, 483 Sq. Mi.
J J A S O N D J F M A M J J A S O N D J F M A M J J A
1984
1985
1986

MONTHLY MEAN DISCHARGE OF SELECTED STREAMS

Unshaded area indicates range between highest and lowest record for the month. Dashed line indicates median of monthly values for reference period, 1951–80. Heavy line indicates mean for current period.


DISCHARGE, IN CUBIC FEET PER SECOND
Altamaha River at Doctortown, GA
Drainage area, 13,800 Sq. Mi.
Alapaha River at Statenville, GA
Drainage area, 1,400 Sq. Mi.
Flint River near Culloden, GA
Drainage area, 1,850 Sq. Mi.
Etowah River at Canton, GA
Drainage area, 613 Sq. Mi.
Paint Rock River near Woodville, AL
Drainage area, 320 Sq. Mi.
Conecuh River at Brantley, AL
Drainage area, 492 Sq. Mi.
Cahaba River at Centreville, AL
Drainage area, 1,029 Sq. Mi.
Tombigbee River at Demopolis L&D near Coatopa, AL
Drainage area, 15,400 Sq. Mi.
J J A S O N D J F M A M J J A S O N D J F M A M J J A
1984
1985
1986

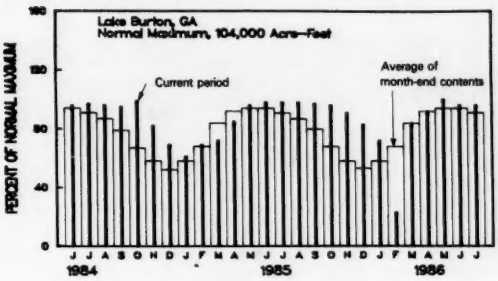
USABLE CONTENTS OF SELECTED RESERVOIRS NEAR END OF JULY 1986

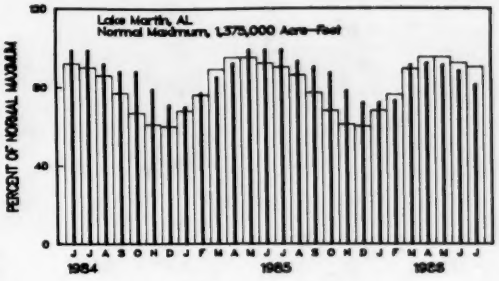
[Contents are expressed in percent of reservoir capacity. The usable storage capacity of each reservoir is shown in the column headed "Normal maximum."]

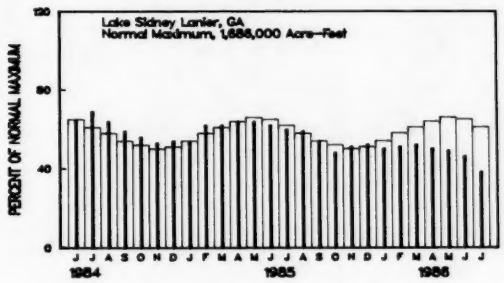
Reservoir Principal uses: F–Flood control I–Irrigation M–Municipal P–Power R–Recreation W–Industrial	Percent of normal maximum: End of July 1986	End of July 1985	Average for end of July	End of June 1986	Normal maximum[a] (acre-feet)
NOVA SCOTIA					
Rossignol, Mulgrave, Falls Lake, St. Margaret's Bay, Black, and Ponhook Reservoirs(P)	45	41	60	60	[b]226,300
QUEBEC					
Allard (P)	80	77	76	79	280,600
Gouin (P)	85	97	69	81	6,954,000
MAINE					
Seven reservoir systems (MP)	76	72	79	81	4,107,000
NEW HAMPSHIRE					
First Connecticut Lake (P)	86	90	88	92	76,450
Lake Francis (FPR)	75	90	86	76	99,310
Lake Winnipesaukee (PR)	103	64	87	92	165,700
VERMONT					
Harriman (P)	89	86	78	91	116,200
Somerset (P)	90	73	82	94	57,390
MASSACHUSETTS					
Cobble Mountain and Borden Brook (MP)	83	56	83	87	77,920
NEW YORK					
Great Sacandaga Lake (FPR)	98	78	82	100	786,700
Indian Lake (FMP)	99	90	90	96	103,300
New York City reservoir system (MW)	89	53	90	98	1,680,000
NEW JERSEY					
Wanaque (M)	80	80	82	90	85,100
PENNSYLVANIA					
Allegheny (FPR)	52	45	45	50	1,180,000
Pymatuning (FMR)	97	95	93	103	188,000
Raystown Lake (FR)	67	68	62	68	761,900
Lake Wallenpaupack (PR)	79	80	73	79	157,800
MARYLAND					
Baltimore municipal system (M)	68	86	91	77	261,900
NORTH CAROLINA					
Bridgewater (Lake James) (P)	86	96	90	88	288,800
Narrows (Badin Lake) (P)	78	86	97	87	128,900
High Rock Lake (P)	50	86	78	63	234,800
SOUTH CAROLINA					
Lake Murray (P)	86	91	77	88	1,614,000
Lakes Marion and Moultrie (P)	84	82	72	78	1,862,000
SOUTH CAROLINA—GEORGIA					
Clark Hill (FP)	47	66	70	54	1,730,000
GEORGIA					
Burton (PR)	96	98	91	96	104,000
Sinclair (MPR)	91	88	90	85	214,000
Lake Sidney Lanier (FMPR)	38	60	61	46	1,686,000
ALABAMA					
Lake Martin (P)	81	99	90	88	1,375,000
TENNESSEE VALLEY					
Clinch Projects: Norris and Melton Hill Lakes (FPR)	44	49	56	50	2,293,000
Douglas Lake (FPR)	94	37	60	39	1,394,000
Hiwassee Projects: Chatuge, Nottely, Hiwassee, Apalachia, Blue Ridge, Ocoee 3, and Parksville Lakes (FPR)	43	66	77	61	1,012,000
Holston Projects: South Holston, Watauga, Boone, Fort Patrick Henry, and Cherokee Lakes (FPR)	20	56	63	64	2,880,000
Little Tennessee Projects: Nantahala, Thorpe, Fontana, and Chilhowee Lakes (FPR)	49	57	77	56	1,478,000
WISCONSIN					
Chippewa and Flambeau (PR)	93	85	83	93	365,000
Wisconsin River (21 reservoirs) (PR)	86	79	74	79	399,000
MINNESOTA					
Mississippi River headwater system (FMR)	47	44	38	48	1,640,000
NORTH DAKOTA					
Lake Sakakawea (Garrison) (FIPR)	96	84	94	93	22,700,000
SOUTH DAKOTA					
Angostura (I)	89	57	86	95	127,600
Belle Fourche (I)	62	33	55	86	185,200
Lake Francis Case (FIP)	77	77	81	81	4,834,000
Lake Oahe (FIP)	96	82	. . .	99	22,530,000
Lake Sharpe (FIP)	99	100	100	101	1,725,000
Lewis and Clark Lake (FIP)	89	93	93	83	477,000
NEBRASKA					
Lake McConaughy (IP)	91	75	75	93	1,948,000
OKLAHOMA					
Eufaula (FRP)	97	96	89	103	2,378,000
Keystone (FPR)	97	88	94	99	661,000
Tenkiller Ferry (FPR)	104	105	96	110	628,200
Lake Altus (FIMR)	41	23	65	46	133,000
Lake O'The Cherokees (FPR)	95	94	91	89	1,492,000
OKLAHOMA—TEXAS					
Lake Texoma (FMPRW)	93	94	100	100	2,722,000
TEXAS					
Bridgeport (IMW)	96	83	52	101	386,400
Canyon (FMR)	100	102	77	102	385,600
International Amistad (FIMPW)	51	64	75	56	3,497,000
International Falcon (FIMPW)	39	38	66	40	2,668,000
Livingston (IMW)	100	99	88	102	1,788,000
Possum Kingdom (IMPRW)	94	93	98	95	570,200
Red Bluff (PI)	61	22	23	44	307,000
Toledo Bend (P)	98	91	89	101	4,472,000
Twin Buttes (FIM)	23	10	27	25	177,800
Lake Kemp (IMW)	104	93	89	102	268,000
Lake Meredith (FWM)	26	31	38	29	796,900
Lake Travis (FIMPRW)	92	82	78	106	1,144,000
MONTANA					
Canyon Ferry (FIMPR)	91	80	92	95	2,043,000
Fort Peck (FPR)	82	77	90	82	18,910,000
Hungry Horse (FIPR)	100	94	97	99	3,451,000
WASHINGTON					
Ross (PR)	100	96	96	99	1,052,000
Franklin D. Roosevelt Lake (IP)	96	89	100	86	5,022,000
Lake Chelan (PR)	98	97	98	100	676,100
Lake Cushman (PR)	125	86	99	102	359,500
Lake Merwin (P)	103	104	105	105	245,600
IDAHO					
Boise River (4 reservoirs) (FIP)	73	69	77	87	1,235,000
Coeur d'Alene Lake (P)	21	97	82	98	238,500
Pend Oreille Lake (FP)	98	99	96	96	1,561,000
IDAHO—WYOMING					
Upper Snake River (8 reservoirs) (MP)	77	60	72	82	4,401,000
WYOMING					
Boysen (FIP)	95	74	89	100	802,000
Buffalo Bill (IP)	91	80	101	107	421,300
Keyhole (F)	35	33	49	39	193,800
Pathfinder, Seminoe, Alcova, Kortes, Glendo, and Guernsey Reservoirs (I)	82	72	61	91	3,056,000
COLORADO					
John Martin (FIR)	57	91	20	66	364,400
Taylor Park (IR)	98	100	91	59	106,200
Colorado–Big Thompson project (I)	92	85	72	94	730,300
COLORADO RIVER STORAGE PROJECT					
Lake Powell; Flaming Gorge, Fontenelle, Navajo, and Blue Mesa Reservoirs (IFPR)	98	96	. . .	69	31,620,000
UTAH—IDAHO					
Bear Lake (IPR)	98	88	69	100	1,421,000
CALIFORNIA					
Folsom (FIP)	80	67	78	99	1,000,000
Hetch Hetchy (MP)	100	85	79	100	360,400
Isabella (FIR)	85	51	45	98	568,100
Pine Flat (FI)	87	33	57	100	1,001,000
Clair Engle Lake (Lewiston) (P)	92	83	85	98	2,438,000
Lake Almanor (P)	97	66	64	103	1,036,000
Lake Berryessa (FIMW)	92	80	82	95	1,600,000
Millerton Lake (FI)	87	44	66	100	503,200
Shasta Lake (FIPR)	81	52	79	88	4,377,000
CALIFORNIA—NEVADA					
Lake Tahoe (IPR)	96	76	70	99	744,600
NEVADA					
Rye Patch (I)	95	78	74	96	194,300
ARIZONA—NEVADA					
Lake Mead and Lake Mohave (FIMP)	91	96	75	93	27,970,000
ARIZONA					
San Carlos (IP)	74	84	20	82	935,100
Salt and Verde River system (IMPR)	85	87	45	89	2,019,100
NEW MEXICO					
Conchas (FIR)	89	86	81	89	330,100
Elephant Butte and Caballo (FIPR)	94	90	31	94	2,453,000

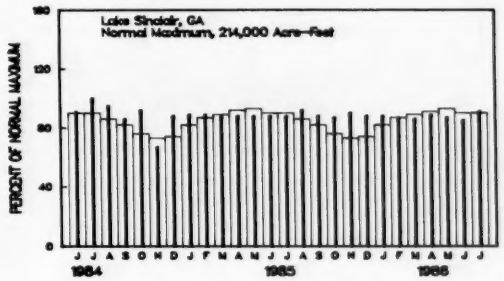
[a] 1 acre-foot = 0.04356 million cubic feet = 0.326 million gallons = 0.504 cubic feet per second day.
[b] Thousands of kilowatt-hours (the potential electric power that could be generated by the volume of water in storage).

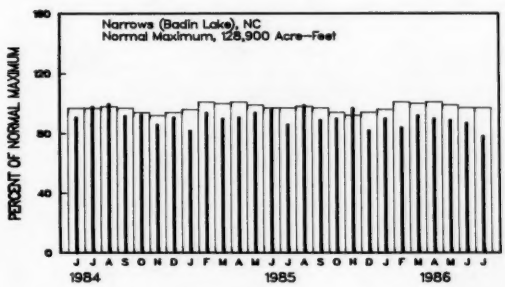
USABLE CONTENTS OF SELECTED RESERVOIRS AND RESERVOIR SYSTEMS

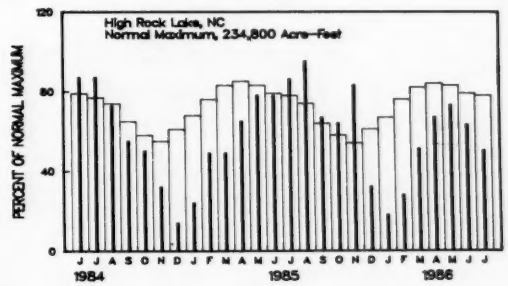


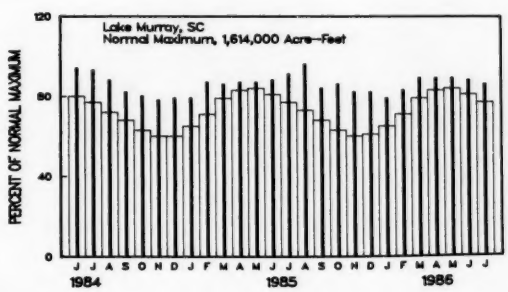

Lake Martin, AL
Normal Maximum, 1,375,000 Acre-Feet
PERCENT OF NORMAL MAXIMUM
0
40
80
120
J J A S O N D J F M A M J J A S O N D J F M A M J J
1984
1985
1986

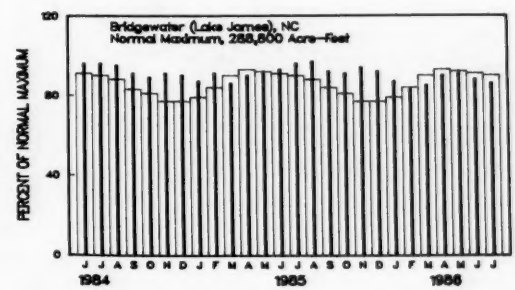

Lake Sidney Lanier, GA
Normal Maximum, 1,688,000 Acre-Feet
PERCENT OF NORMAL MAXIMUM
0
40
80
120
J J A S O N D J F M A M J J A S O N D J F M A M J J
1984
1985
1986

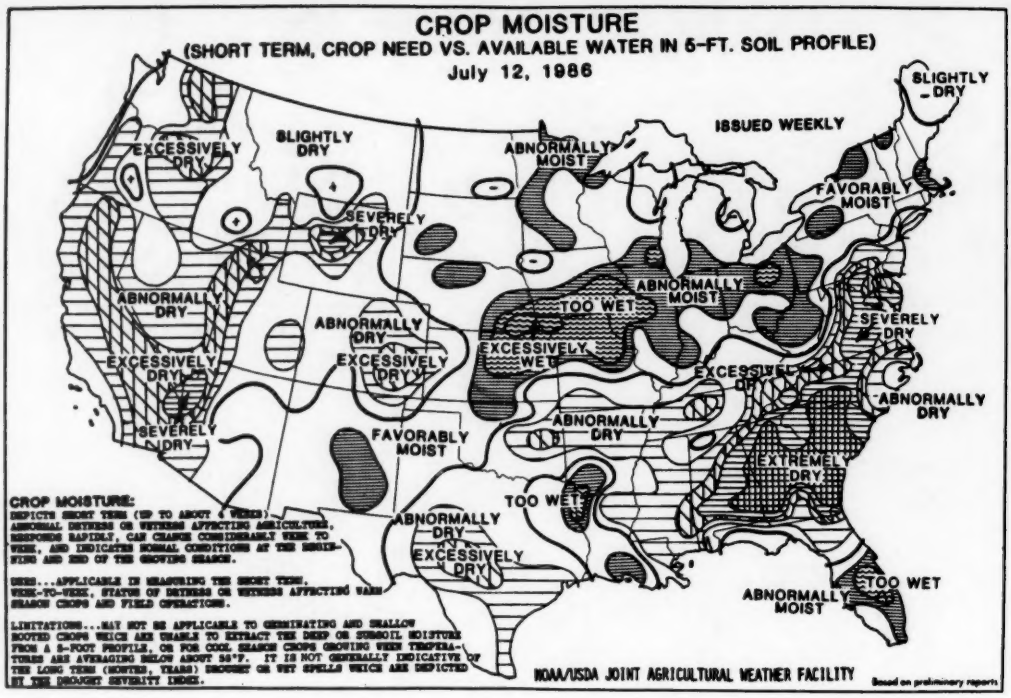


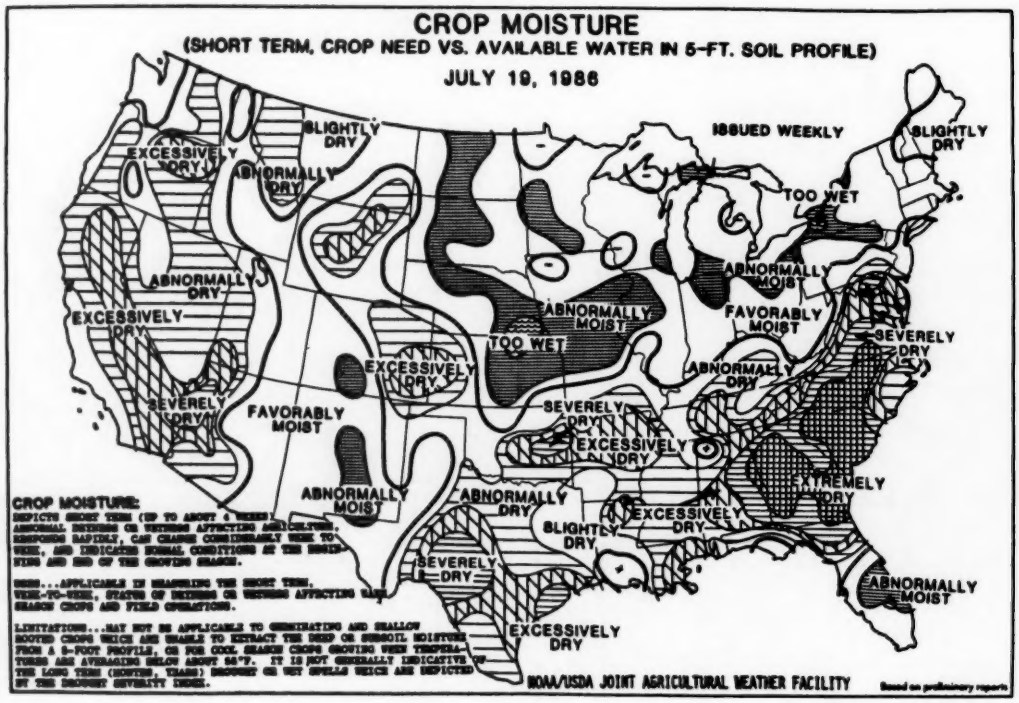



High Rock Lake, NC
Normal Maximum, 234,800 Acre-Feet
PERCENT OF NORMAL MAXIMUM
0
40
80
120
J J A S O N D J F M A M J J A S O N D J F M A M J J
1984
1985
1986


Lake Murray, SC
Normal Maximum, 1,614,000 Acre-Feet
PERCENT OF NORMAL MAXIMUM
0
40
80
120
J J A S O N D J F M A M J J A S O N D J F M A M J J
1984
1985
1986


Bridgewater (Lake James), NC
Normal Maximum, 288,800 Acre-Feet
PERCENT OF NORMAL MAXIMUM
0
40
80
120
J J A S O N D J F M A M J J A S O N D J F M A M J J
1984
1985
1986


CROP MOISTURE
(SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)
July 12, 1986
ISSUED WEEKLY
EXCESSIVELY DRY
SLIGHTLY DRY
ABNORMALLY MOIST
SLIGHTLY DRY
FAVORABLY MOIST
SEVERELY DRY
ABNORMALLY DRY
TOO WET
ABNORMALLY MOIST
ABNORMALLY DRY
SEVERELY DRY
EXCESSIVELY WET
EXCESSIVELY DRY
EXCESSIVELY DRY
EXCESSIVELY DRY
ABNORMALLY DRY
SEVERELY DRY
ABNORMALLY DRY
FAVORABLY MOIST
EXTREMELY DRY
TOO WET
ABNORMALLY DRY
EXCESSIVELY DRY
TOO WET
ABNORMALLY MOIST
CROP MOISTURE:
DEPICTS SHORT TERM (UP TO ABOUT 6 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE. RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK, AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.
USES...APPLICABLE IN MEASURING THE SHORT TERM, WEEK-TO-WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING VARIOUS CROPS AND FIELD OPERATIONS.
LIMITATIONS...MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A 5-FOOT PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 50°F. IT IS NOT GENERALLY INDICATIVE OF THE LONG TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


CROP MOISTURE
(SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)
JULY 19, 1986
ISSUED WEEKLY
SLIGHTLY DRY
EXCESSIVELY DRY
SLIGHTLY DRY
ABNORMALLY DRY
TOO WET
ABNORMALLY DRY
ABNORMALLY MOIST
ABNORMALLY MOIST
FAVORABLY MOIST
EXCESSIVELY DRY
TOO WET
SEVERELY DRY
ABNORMALLY DRY
SEVERELY DRY
FAVORABLY MOIST
SEVERELY DRY
EXCESSIVELY DRY
EXTREMELY DRY
ABNORMALLY MOIST
ABNORMALLY DRY
EXCESSIVELY DRY
SLIGHTLY DRY
SEVERELY DRY
ABNORMALLY MOIST
EXCESSIVELY DRY
CROP MOISTURE:
DEPICTS SHORT TERM (UP TO ABOUT 6 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE. RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK, AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.
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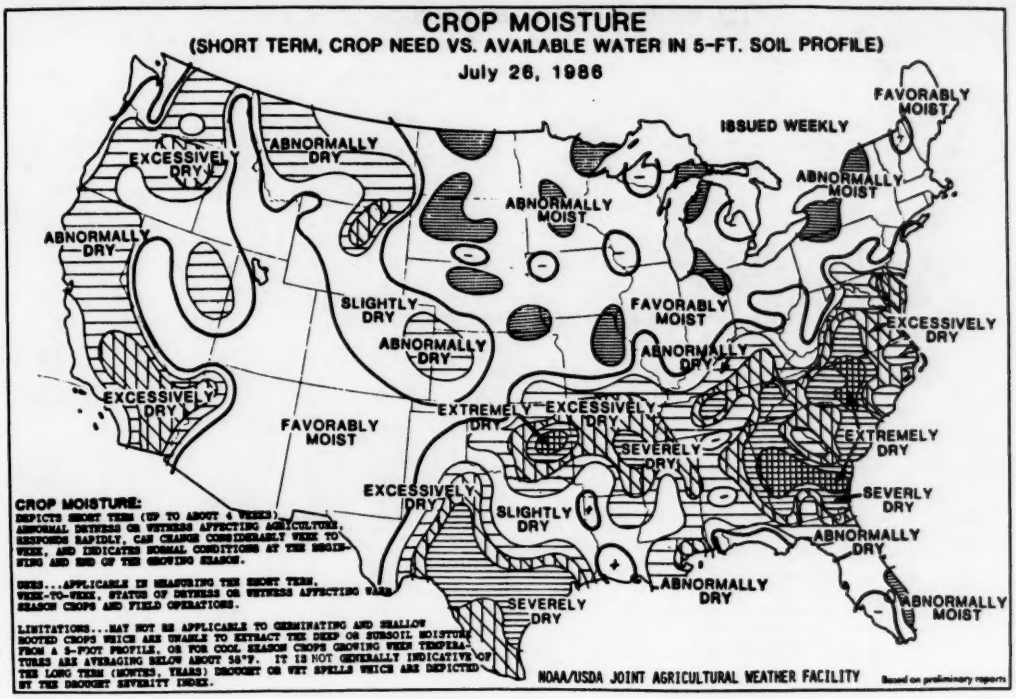
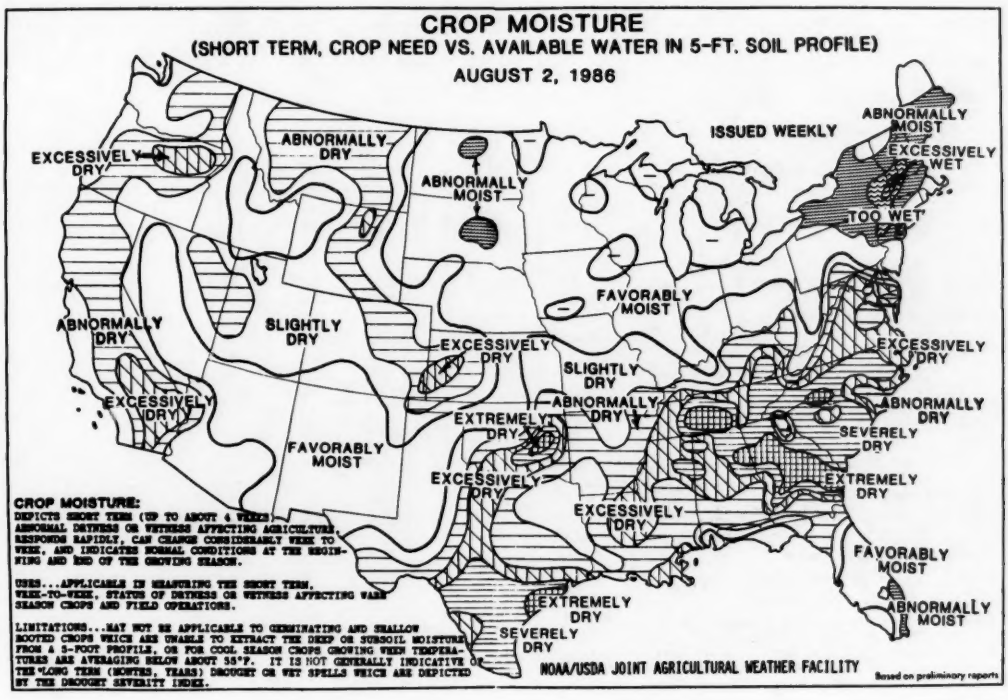
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


CROP MOISTURE
(SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)
July 26, 1986
ISSUED WEEKLY
EXCESSIVELY DRY
ABNORMALLY DRY
ABNORMALLY MOIST
FAVORABLY MOIST
SLIGHTLY DRY
EXTREMELY DRY
SEVERELY DRY
CROP MOISTURE:
DEPICTS SHORT TERM (UP TO ABOUT 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE. RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK, AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.
USES...APPLICABLE IN MEASURING THE SHORT TERM, WEEK-TO-WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS.
LIMITATIONS...MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A 5-FOOT PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 58°F. IT IS NOT GENERALLY INDICATIVE OF THE LONG TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


CROP MOISTURE
(SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)
AUGUST 2, 1986
ISSUED WEEKLY
EXCESSIVELY DRY
ABNORMALLY DRY
ABNORMALLY MOIST
EXCESSIVELY WET
TOO WET
FAVORABLY MOIST
SLIGHTLY DRY
EXTREMELY DRY
SEVERELY DRY
CROP MOISTURE:
DEPICTS SHORT TERM (UP TO ABOUT 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE. RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK, AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.
USES...APPLICABLE IN MEASURING THE SHORT TERM, WEEK-TO-WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS.
LIMITATIONS...MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A 5-FOOT PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55°F. IT IS NOT GENERALLY INDICATIVE OF THE LONG TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

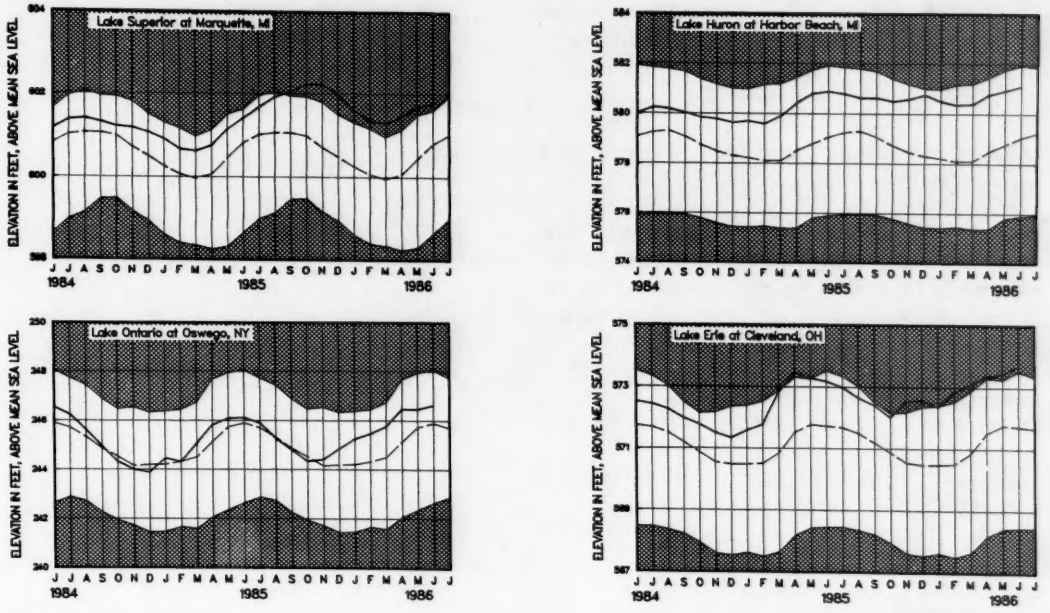
FLOW OF LARGE RIVERS DURING JULY 1986

Station number	Stream and place of determination	Drainage area (square miles)	Average discharge through September 1980 (cubic feet per second)	July 1986					
				Monthly mean discharge (cubic feet per second)	Percent of median monthly discharge, 1951—80	Change in discharge from previous month (percent)	Discharge near end of month		
							Cubic feet per second	Million gallons per day	Date
01014000	St. John River below Fish River at Fort Kent, ME.	5,690	9,647	9,093	196	−1	4,680	3,024	31
01318500	Hudson River at Hadley, NY.....	1,664	2,909	2,420	233	−27	2,900	1,870	31
01357500	Mohawk River at Cohoes, NY.....	3,456	5,734	3,320	178	−49	2,900	1,870	31
01463500	Delaware River at Trenton, NJ.....	6,780	11,750	5,660	117	−56	6,620	4,278	31
01570500	Susquehanna River at Harrisburg, PA.	24,100	34,530	15,180	128	−51	13,300	8,600	29
01646500	Potomac River near Washington, DC.	11,560	[1]11,490	[1]2,670	66	−28	1,990	1,286	31
02105500	Cape Fear River at William O. Huske Lock near Tarheel, NC.	4,810	5,005	982	50	−9	1,090	704	31
02131000	Pee Dee River at Peedee, SC.....	8,830	9,851	1,850	33	−17	1,430	924	29
02226000	Altamaha River at Doctortown, GA....	13,600	13,880	1,907	29	−25	2,010	1,299	31
02320500	Suwannee River at Branford, FL.....	7,880	6,987	3,380	66	−14	3,240	2,094	31
02358000	Apalachicola River at Chattahoochee, FL.	17,200	22,570	7,840	58	−12	7,080	4,575	31
02467000	Tombigbee River at Demopolis lock and dam near Coatopa, AL.	15,400	23,300	3,135	50	−77	2,730	1,764	31
02489500	Pearl River near Bogalusa, LA.....	6,630	9,768	2,334	72	−61	2,180	1,408	31
03049500	Allegheny River at Natrona, PA.....	11,410	[1]19,480	[1]20,500	341	−28	31,100	20,100	25
03085000	Monongahela River at Braddock, PA..	7,337	[1]12,510	[1]14,620	362	+284	10,200	6,590	24
03193000	Kanawha River at Kanawha Falls, WV.	8,367	12,590	8,085	158	+70	4,760	3,076	28
03234500	Scioto River at Higby, OH.....	5,131	4,547	3,050	181	+30	936	604	31
03294500	Ohio River at Louisville, KY[2].....	91,170	116,000	84,800	173	+21	48,100	31,090	30
03377500	Wabash River at Mount Carmel, IL....	28,635	27,220	23,940	155	−34	14,100	9,110	31
03469000	French Broad River below Douglas Dam, TN.	4,543	6,798	1,713	41	−37	.....	.....	...
04084500	Fox River at Rapide Croche Dam, near Wrightstown, WI.[2]	6,150	4,163	4,862	203	+22	8,807	5,692	31
04264331	St. Lawrence River at Cornwall, Ontario–near Massena, NY.[3]	299,000	242,700	334,700	123	+3	325,000	210,100	31
02NG001	St. Maurice River at Grand Mere, PQ.	16,300	25,150	26,600	134	+2	16,100	10,410	31
05082500	Red River of the North at Grand Forks, ND.	30,100	2,551	4,419	166	−29	3,550	2,294	31
05133500	Rainy River at Manitou Rapids, MN...	19,400	11,830	15,500	94	−13	11,300	7,300	29
05330000	Minnesota River near Jordan, MN.....	16,200	3,402	11,080	264	−26	7,500	4,850	31
05331000	Mississippi River at St. Paul, MN.....	36,800	[1]10,610	27,730	212	−19	23,000	14,900	31
05365500	Chippewa River at Chippewa Falls, WI.	5,600	5,100	5,743	182	+124	6,500	4,200	31
05407000	Wisconsin River at Muscoda, WI.....	10,300	8,617	7,455	132	+7	6,945	4,488	31
05446500	Rock River near Joslin, IL.....	9,551	5,873	8,970	258	+34	6,600	4,270	31
05474500	Mississippi River at Keokuk, IA.....	119,000	62,620	115,000	184	0	91,400	59,070	31
06214500	Yellowstone River at Billings, MT.....	11,796	7,038	12,200	81	−62	8,390	5,422	31
06934500	Missouri River at Hermann, MO.....	524,200	79,490	133,200	176	+31	83,400	53,900	31
07289000	Mississippi River at Vicksburg, MS[4]...	1,140,500	576,600	535,200	127	−28	544,000	351,600	28
07331000	Washita River near Dickson, OK.....	7,202	1,368	571	137	−74	381	246	31
08276500	Rio Grande below Taos Junction Bridge, near Taos, NM.	9,730	725	2,645	809	−49	980	633	31
09315000	Green River at Green River, UT.....	40,600	6,298	12,240	214	−55	7,100	4,590	31
11425500	Sacramento River at Verona, CA.....	21,257	18,820	13,630	140	+41	14,700	9,500	29
13269000	Snake River at Weiser, ID.....	69,200	18,050	12,810	116	−66	11,960	7,729	31
13317000	Salmon River at White Bird, ID.....	13,550	11,250	10,460	72	−77	6,450	4,168	31
13342500	Clearwater River at Spalding, ID.....	9,570	15,480	6,150	55	−72	3,680	2,380	31
14105700	Columbia River at The Dalles, OR[5]....	237,000	[1]193,100	[1]191,200	68	−59	135,700	87,710	29
14191000	Willamette River at Salem, OR.....	7,280	[1]23,510	[1]4,960	90	−40	6,250	4,039	29
15515500	Tanana River at Nenana, AK.....	25,600	23,460	67,420	116	+54	.....	.....	...
08MF005	Fraser River at Hope, BC.....	83,800	96,290	192,100	101	−36	151,100	97,680	31

[1]Adjusted.
[2]Records furnished by Corps of Engineers.
[3]Records furnished by Buffalo District, Corps of Engineers, through International St. Lawrence River Board of Control. Discharges shown are considered to be the same as discharge at Ogdensburg, N.Y. when adjusted for storage in Lake St. Lawrence.
[4]Records of daily discharge computed jointly by Corps of Engineers and Geological Survey.
[5]Discharge determined from information furnished by Bureau of Reclamation, Corps of Engineers, and Geological Survey.

SURFACE WATER — GREAT LAKES ELEVATIONS

Unshaded area indicates range between highest and lowest record for the month. Dashed line indicates median of monthly values for reference period, 1951–80. Heavy line indicates mean for current period.


Lake Superior at Marquette, MI
Lake Huron at Harbor Beach, MI
Lake Ontario at Oswego, NY
Lake Erie at Cleveland, OH
ELEVATION IN FEET, ABOVE MEAN SEA LEVEL
J J A S O N D J F M A M J J A S O N D J F M A M J J
1984
1985
1986

Provisional data; subject to revision

DISSOLVED SOLIDS AND WATER TEMPERATURES, FOR JULY 1986, AT DOWNSTREAM SITES ON SIX LARGE RIVERS

Station number	Station name	July data of following calendar years	Stream discharge during month	Dissolved-solids concentration[a]		Dissolved-solids discharge[a]			Water temperature[b]		
			Mean (cfs)	Minimum (mg/L)	Maximum (mg/L)	Mean	Minimum	Maximum	Mean in °C	Minimum, in °C	Maximum, in °C
						(tons per day)					
01463500	Delaware River at Trenton, NJ (Morrisville, PA).	1986	5,660	94.8	123	1,620	1,160	2,110	25.0	23.0	27.5
		1945–85	7,237	57	145	....	465	16,700	...	18.5	33.5
		(Extreme yr)		(1947)	(1978)		(1965)	(1969)			
			[c]4,822								
04264331	St. Lawrence River at Cornwall, Ontario, near Massena, NY (median streamflow at Ogdensburg, NY).	1986	334,700	167	167	150,800	146,400	153,800	19.0	17.0	21.5
		1976–85	290,000	165	169	130,200	109,000	158,000	20.0	16.0	23.0
		(Extreme yr)		(d)	(1981)		(1977)	(1976)			
			[c]272,800								
07289000	Mississippi River at Vicksburg, MS.	1986	541,300	239	305	416,600	327,500	494,200	30.0	29.0	31.0
		1976–85	513,000	200	303	331,700	163,000	633,000	29.0	23.5	34.5
		(Extreme yr)		(1981)	(1978)		(1977)	(1980)			
			[c]421,700								
03612500	Ohio River at lock and dam 53, near Grand Chain, IL (streamflow station at Metropolis, IL).	1986	152,000	181	251	....	59,800	147,000	...	26.5	29.0
		1955–85	156,900	124	276	....	25,000	237,000	...	16.5	31.0
		(Extreme yr)		(1965, 1967)	(1968)		(1966)	(1958)			
			[c]143,700								
06934500	Missouri River at Hermann, MO (60 miles west of St. Louis, MO).	1986	133,000	253	438	114,000	84,800	155,000	29.0	27.0	30.0
		1976–85	100,800	201	501	93,390	44,700	208,000	27.5	22.0	32.0
		(Extreme yr)		(1981)	(1985)		(1977)	(1984)			
			[c]75,690								
14128910	Columbia River at Warrendale, OR (streamflow station at The Dalles, OR).	1986	191,200	...	...	.....	.....	.....	...	...	...
		1976–85	184,000	60	93	37,300	12,500	65,100	18.5	15.5	22.0
		(Extreme yr)		(1976)	(1977)		(1977)	(1981)			
			[c]279,500								

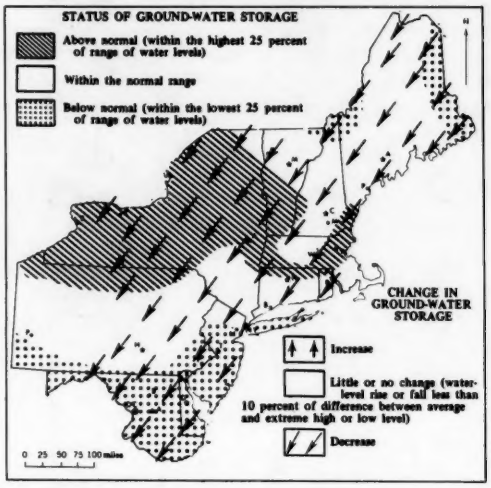
[a]Dissolved-solids concentrations, when not analyzed directly, are calculated on basis of measurements of specific conductance.
[b]To convert °C to °F: [(1.8 X °C) + 32] = °F.
[c]Median of monthly values for 30-year reference period, water years 1951—80, for comparison with data for current month.
[d]Occurred several years.

GROUND-WATER CONDITIONS DURING JULY 1986

Ground-water levels continued to decline seasonally in most of the northeast region. (See map.) Levels rose or changed only slightly in western Maryland and Pennsylvania. Levels near end of July remained above average in much of New York State and parts of Connecticut, Massachusetts and southern New Hampshire and Vermont. Below-average levels persisted in Maryland, Delaware, and southern New Jersey. Levels were below average also in parts of northeastern and northwestern Maine.

In the Southeastern States, ground-water levels showed mixed trends in West Virginia, Kentucky, North Carolina, and Louisiana. Levels declined in all but one of many observation wells in Georgia. Levels declined in Virginia, Arkansas, and Mississippi. Water levels were above average in Kentucky, and mixed with respect to average in West Virginia and North Carolina. Levels were below average in Virginia, Arkansas, Louisiana, and Georgia. New low ground-water levels for July occurrred in five wells in Georgia. A new alltime low level, in 45 years or record, was reached in the key well in Memphis, in western Tennessee, and a new alltime low level was reached also in the key well in the Savannah area in the coastal plain of Georgia, in 30 years or record.

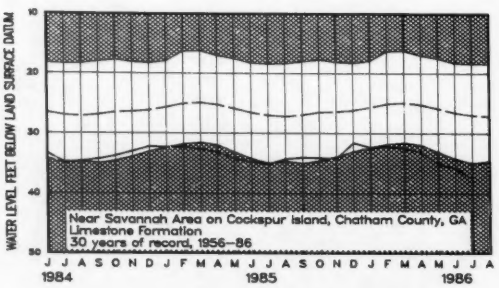
In the central and western Great Lakes States, ground-water levels showed mixed trends in Minnesota and Iowa and declined in Wisconsin and Michigan. Water levels

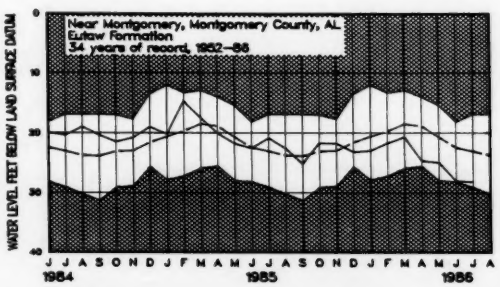

STATUS OF GROUND-WATER STORAGE
Above normal (within the highest 25 percent of range of water levels)
Within the normal range
Below normal (within the lowest 25 percent of range of water levels)
CHANGE IN GROUND-WATER STORAGE
Increase
Little or no change (water-level rise or fall less than 10 percent of difference between average and extreme high or low level)
Decrease
0 25 50 75 100 miles

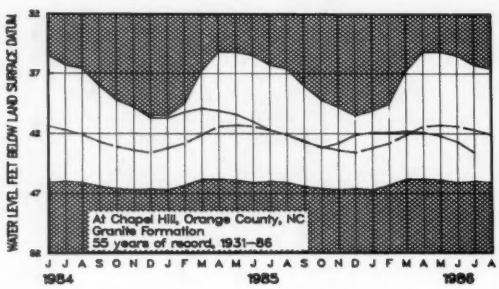
Map showing ground-water storage near end of July and change in ground-water storage from end of June to end of July.

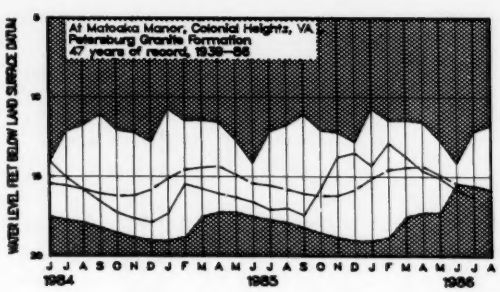
MONTH-END GROUND-WATER LEVELS IN KEY WELLS

Unshaded area indicates range between highest and lowest record for the month. Dashed line indicates average of monthly levels in previous years. Heavy line indicates level for current period.


WATER LEVEL, FEET BELOW LAND SURFACE DATUM
Near Savannah Area on Cockspur Island, Chatham County, GA
Limestone Formation
30 years of record, 1956–86
J J A S O N D J F M A M J J A S O N D J F M A M J J A
1984
1985
1986


WATER LEVEL, FEET BELOW LAND SURFACE DATUM
Near Montgomery, Montgomery County, AL
Eutaw Formation
34 years of record, 1952–86
J J A S O N D J F M A M J J A S O N D J F M A M J J A
1984
1985
1986


WATER LEVEL, FEET BELOW LAND SURFACE DATUM
At Chapel Hill, Orange County, NC
Granite Formation
55 years of record, 1931–86
J J A S O N D J F M A M J J A S O N D J F M A M J J A
1984
1985
1986


WATER LEVEL, FEET BELOW LAND SURFACE DATUM
At Matoaka Manor, Colonial Heights, VA
Petersburg Granite Formation
47 years of record, 1938–86
J J A S O N D J F M A M J J A S O N D J F M A M J J A
1984
1985
1986

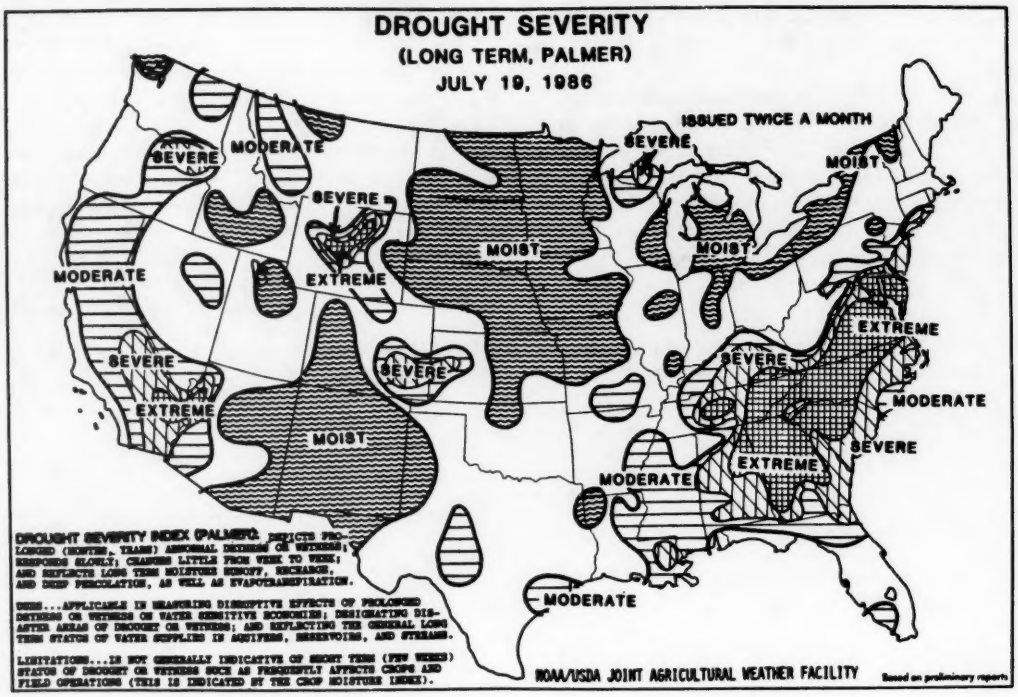
were near or above average in Wisconsin, above average in Minnesota, and mostly above average in Michigan and Iowa.

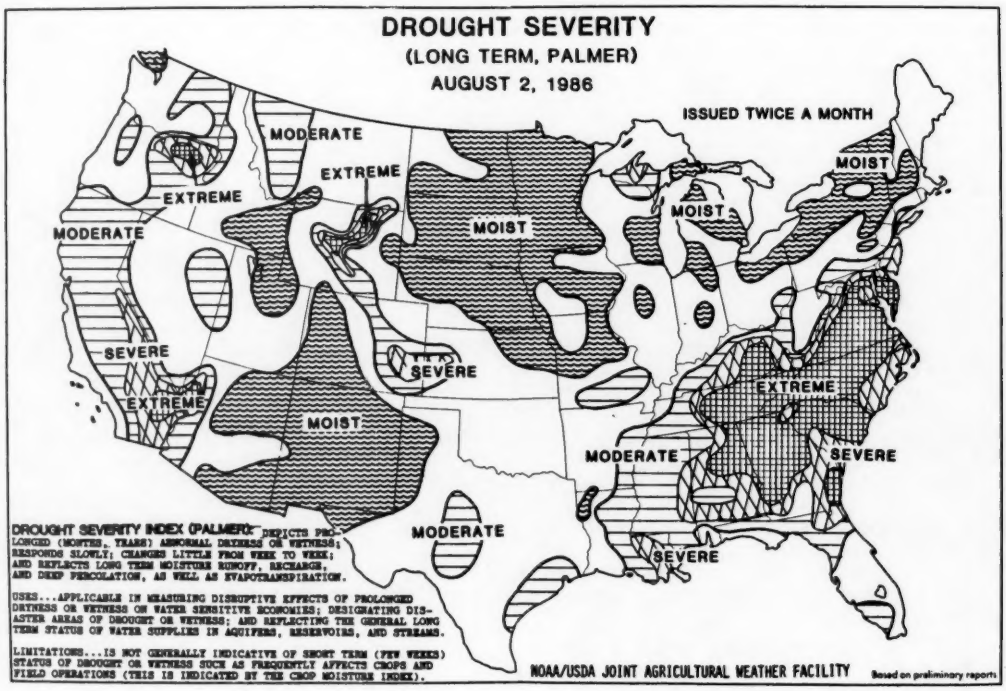
In the Western States, ground-water levels rose in Utah and New Mexico, showed mixed trends in Idaho, North Dakota, Kansas, Arizona, and Texas, and declined in Washington, Nebraska, southern California, and Nevada. Water levels were mixed with respect to average in Idaho, North Dakota, Nebraska, southern California, Nevada, Utah, Kansas, New Mexico, and Texas. Levels were below average in Washington and Arizona. New high ground-water levels for July were recorded in Nevada and New Mexico, and new low levels for July were reached in Nevada and Kansas. A new alltime high level, in 26 years of record, was recorded in the Blanding area of Utah. A new alltime low level was noted in the Halstead well in south-central Kansas, in 46 years of record. An alltime low level, in 43 years of record, also occurred in the Dayton well in the southern part of the Roswell Basin, in New Mexico.

Provisional data; subject to revision

WATER LEVELS IN KEY OBSERVATION WELLS IN SOME REPRESENTATIVE AQUIFERS IN THE CONTERMINOUS UNITED STATES—JULY 1986

Aquifer and Location	Water level in feet with reference to land-surface datum	Departure from average in feet	Net change in water level in feet since:		Year records began	Remarks
			Last month	Last year		
Glacial drift at Hanska, south-central Minnesota.	−5.07	+1.18	−0.02	+0.83	1942	
Glacial drift at Roscommon in north-central part of Lower Peninsula, Michigan.	−4.32	+0.30	−0.35	−0.11	1935	
Glacial drift at Marion, Iowa.....	−3.92	+1.26	−0.99	+1.08	1941	
Glacial drift at Princeton in northwestern Illinois.	−7.04	+4.69	+1.84	+3.54	1943	
Petersburg Granite, southeastern Piedmont near Fall Zone, Colonial Heights, Virginia.	−16.37	−0.78	−0.53	+0.73	1939	
Glacial outwash sand and gravel, Louisville, Kentucky (U.S. well no. 2).	−17.66	+7.20	+0.02	−1.00	1946	
500-foot sand aquifer near Memphis, Tennessee (U.S. well no. 2).	−105.90	−16.41	−1.10	−1.42	1941	Alltime low.
Granite in eastern Piedmont Province, Chapel Hill, North Carolina (U.S. well no. 5).	−43.62	−2.02	−0.85	−1.92	1931	
Sparta Sand in Pine Bluff industrial area, Arkansas.	−222.05	−15.77	−8.45	−7.56	1958	
Eutaw Formation in the City of Montgomery, Alabama (U.S. well no. 4).	−28.2	−5.6	−0.10	−7.3	1952	
Limestone aquifer on Cockspur Island, Savannah area, Georgia (U.S. well no. 6).	−37.60	−10.09	−1.80	−2.50	1956	Alltime low.
Sand and gravel in Puget Trough, Tacoma, Washington.	−112.03	−1.03	−0.45	+0.15	1952	
Pleistocene glacial outwash gravel, North Pole, northern Idaho (U.S. well no. 3).	−461.7	−2.4	−0.2	−3.5	1929	
Snake River Group: Snake River Plain Aquifer, at Eden, Idaho (U.S. well no. 4).	−120.5	−2.9	+1.2	+0.2	1957	
Alluvial valley fill in Flowell area, Millard County, Utah (U.S. well no. 9).	−14.55	.....	+0.85	−5.23	1929	
Alluvial sand and gravel, Platte River Valley, Ashland, Nebraska (U.S. well no. 6).	−4.77	+0.66	−0.42	+0.03	1935	
Alluvial Valley fill in Steptoe Valley, Nevada.	−8.60	+4.53	−0.57	+0.30	1950	July high.
Pleistocene terrace deposits in Kansas River valley, at Lawrence, northeastern Kansas.	−17.63	+2.91	+0.87	+1.14	1953	
Alluvium and Paso Robles clay, sand, and gravel, Santa Maria Valley, California	−122.52	+18.87	−7.89	−13.34	1957	
Valley fill, Elfrida area, Douglas, Arizona (U.S. well no. 15).	−105.2	−23.3	−0.1	+0.4	1951	
Hueco bolson, El Paso area, Texas.....	−266.72	−16.06	+0.09	+0.64	1965	
Evangeline aquifer, Houston area, Texas.....	−312.00	−11.08	−6.60	−3.23	1965	


DROUGHT SEVERITY
(LONG TERM, PALMER)
JULY 19, 1986
ISSUED TWICE A MONTH
SEVERE
MODERATE
SEVERE
MOIST
MOIST
SEVERE
MOIST
MODERATE
EXTREME
EXTREME
SEVERE
SEVERE
SEVERE
MODERATE
EXTREME
MOIST
SEVERE
EXTREME
MODERATE
MODERATE
DROUGHT SEVERITY INDEX (PALMER): DEPICTS PRO-
LONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS;
RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK;
AND REFLECTS LONG TERM MOISTURE RUNOFF, RECHARGE,
AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.
USES...APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED
DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES; DESIGNATING DIS-
ASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG
TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS, AND STREAMS.
LIMITATIONS...IS NOT GENERALLY INDICATIVE OF SHORT TERM (FEW WEEKS)
STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND
FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DROUGHT SEVERITY
(LONG TERM, PALMER)
AUGUST 2, 1986
ISSUED TWICE A MONTH
MODERATE
EXTREME
MOIST
EXTREME
MOIST
MODERATE
MOIST
SEVERE
SEVERE
EXTREME
EXTREME
MOIST
MODERATE
SEVERE
MODERATE
SEVERE
DROUGHT SEVERITY INDEX (PALMER): DEPICTS PRO-
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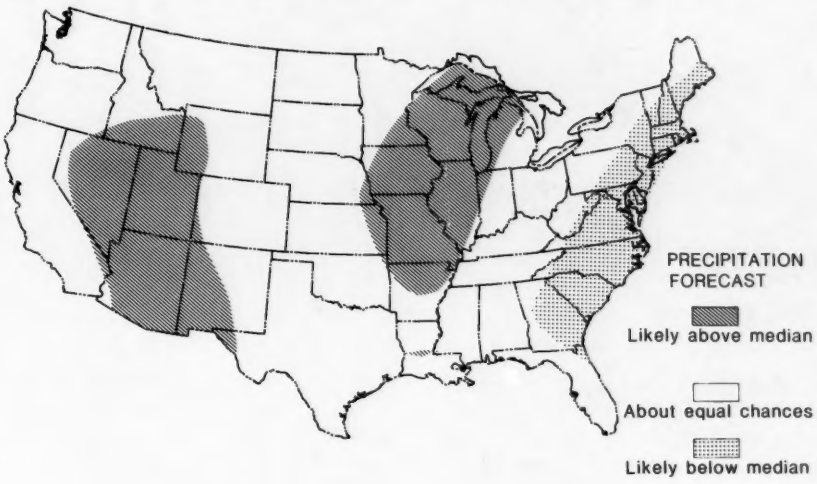
Based on preliminary reports

PRECIPITATION FORECAST FOR AUGUST THROUGH OCTOBER 1986



(From Monthly and Seasonal Weather Outlook Published by National Weather Service)

NATIONAL WATER CONDITIONS

July 1986

Based on reports from the Canadian and U.S. Field offices; completed August 14, 1986

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EXPLANATION OF DATA (Revised January 1986)

Cover map shows generalized pattern of streamflow for the month based on provisional data from 184 index gaging stations—18 in Canada, 164 in the United States, and 2 in the Commonwealth of Puerto Rico. Alaska and Hawaii inset maps show streamflow only at the index gaging stations that are located near the point shown by the arrows. Classifications on map are based on comparison of streamflow for the current month at each index station with the flow for the same month in the 30-year reference period, 1951–80. Shorter reference periods are used for one Canadian index station, two Kansas index stations, one New York index station, and the Puerto Rico index stations because of the limited records available.

The comparative data are obtained by ranking the 30 flows for each month of the reference period in order of decreasing magnitude—the highest flow is given a ranking of 1 and the lowest flow is given a ranking of 30. Quartiles (25-percent points) are computed by averaging the 7th and 8th highest flows (upper quartile), 15th and 16th highest flows (middle quartile and median), and the 23rd and 24th highest flows (lower quartile). The upper and lower quartiles set off the highest 25 percent of flows and lowest 25 percent of flows, respectively, for the reference period. The median (middle quartile) is the middle value by definition. For the reference period, 50 percent of the flows are greater than the median, 50 percent are less than the median, 50 percent are between the upper and lower quartiles (in the normal range) 25 percent are greater than the upper quartile (above normal), and 25 percent are less than the lower quartile (below normal). Flow for the current month is then classified as; *above normal* if it is greater than the upper quartile, *in the normal range* if it is between the upper and lower quartiles, and *below normal* if it is less than the lower quartile. Change in flow from the previous month to the current month is classified as *seasonal* if the change is in the same direction as the change in the median. If the change is in the opposite direction of the change in the median, the change is classified as *contraseasonal* (opposite to the seasonal change). For example: at a particular index station, the January median is greater than the December median; if flow for the current January increased from December (the previous month), the increase is seasonal; if flow for the current January decreased from December, the decrease is contraseasonal.

Flood frequency analyses define the relation of flood peak magnitude to probability of occurrence or recurrence interval. *Probability of occurrence* is the chance that a given flood magnitude will be exceeded in any one year. *Recurrence interval* is the reciprocal of probability of occurrence and is the *average* number of years between occurrences. For example, a flood having a probability of occurrence of 0.01 (1 percent) has a recurrence interval of 100 years. *Recurrence intervals imply no regularity of occurrence;* a 100-year flood might be exceeded in consecutive years or it might not be exceeded in a 100-year period.

Statements about *ground-water levels* refer to conditions near the end of the month. The water level in each key observation well is compared with average level for the end of the month determined from the 30-year reference period, 1951-80, or from the entire past record for that well when only limited records are available. Comparative data for ground-water levels are obtained in the same manner as comparative data for streamflow. *Changes in ground-water levels,* unless described otherwise, are from the end of the previous month to the end of the current month.

Dissolved solids and temperature data for July are given for six stream-sampling sites that are part of the National Stream Quality Accounting Network (NASQAN). *Dissolved solids* are minerals dissolved in water and usually consist predominately of silica and ions of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, sulfate, chloride, and nitrate. *Dissloved-solids discharge* represents the total daily amount of dissolved minerals carried by the stream. *Dissolved-solids concentrations* are generally higher during periods of low streamflow, but the highest dissolved-solids *discharges* occur during periods of high streamflow because the total quantities of water, and therefore total load of dissolved minerals, are so much greater than at times of low flow.

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DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
NATIONAL CENTER, STOP 419
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